

Work Order ID 137594

Wednesday, October 07, 2015 12:40:31 PM

137594

Please cut ASAP

~~No Stock~~ To ship Jan 15 Page 1

Item ID: D3859-041

Revision ID:

Item Name: Wearplate

Start Date: 10/02/15 Start Qty: 4.00

Required Date: 10/07/15 Req'd Qty: 4.00

Reference:

split

Accept
(4)
4 10
4 10

N9000040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Customer:

Approvals:

Process Plan: MJS

Date: OCT 07 2015 Tooling:

Date:

QC:

Date: SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3859	B

100

100

Waterjet

FLOW CNC Waterjet

FLOW WATER JET

Memo

1-Cut as per Dwg D3859-1

Dwg Rev: B

Prog Rev: B

2-Deburr if necessary

0.00

0.01

(10)

Dec 16/01/07

110

110

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.00

(10)

Dec 16/01/07

120

120

QC

Quality Control

QC8- Inspect parts - second check

Memo

0.00

0.00

(10)

DAS
38
9-89
JAN 08 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS			
Part No. _____		Rework ☐	Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	
NCR No. _____		Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	
		Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	
		Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐		
Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation				Disposition			
				Completed By			
				Lead hand / Supervisor Approval Verification			
				QC / QA Coordinator Approval			
Root Cause		FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐						
Misidentified ☐	Past Due ☐	OTHER : _____					

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Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Stop *NS2*

Start Date: 10/02/15 **Start Qty:** 4.00 ***4***

Cust Item ID:

Required Date: 10/07/15 **Req'd Qty:** 4.00 ***4***

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Operation Description

Set Up/
Run Hours

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
---------	--------	-----------	------------	------------	---------------	-------------

130

0.00

130

Large Fab

0.04

Large Fab

Memo

1-Weld D4379-5 cups as per dwg D3859

A/R 316L stainless steel rod Batch: *m/26 014*

2-Weld hard facing as per Dwg D3859

A/R 2059B Hard Coat rod Batch: m130145

*****use DT9462 for welding*****

140

QC9- Inspect visual per QSI004- Fusion Welds	0.00
--	------

140

QC

Memo

0.00

Quality Control

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	☐	Pressure/Forced ☐	☐	Temperature/Cure ☐	☐
Design ☐	☐	Operator ☐	☐	Bending ☐	☐	Set-up ☐	☐
Doc/Data ☐	☐	Offset/Setup ☐	☐	Centre Not Concentric ☐	☐	BOM/Route ☐	☐
Equip/Tooling ☐	☐	Supplier ☐	☐	Cracks ☐	☐	Broken/Damage/Defect ☐	☐
Handling/Pre ☐	☐	Training ☐	☐	Crimp/Kink/Ripple/Wave ☐	☐	Inspection Incomplete/Unqualified ☐	☐
Material ☐	☐	Use for Testing ☐	☐	Cuffs ☐	☐	Contamination ☐	☐
Internal Transport ☐	☐	Poor Information ☐	☐	Crushing ☐	☐	Countersink ☐	☐
Tribal Knowledge ☐	☐	Rushing ☐	☐	Heat Treat ☐	☐	Cut Too Short ☐	☐
LOA ☐	☐	Product Improvement ☐	☐	Wave/Twist in Tube ☐	☐	Instructions Incomplete/Unclear ☐	☐
Substation ☐	☐	Process Improvement ☐	☐	Marks/Chatter ☐	☐	Drill Holes ☐	☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	☐	OTHER : _____			
Misidentified ☐	☐	Past Due ☐	☐				

Work Order ID 137594

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Item ID: D3859-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Wearplate
 Start Date: 10/02/15 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 10/07/15 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC5- Inspect part completeness to step on W/O	0.00							
150									
QC	Memo	0.00				④	16-01-12	PD.	
Quality Control									
160	Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3	0.00							
160									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: 1:35 OVEN TEMPERATURE: 320° FINISH TIME: 2:05								
170	QC3- Inspect Part Finish	0.00							
170									
QC	Memo	0.00				④			DAS 38 9-89
Quality Control									

JAN 12 2016

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 137594

Wednesday, October 07, 2015 12:40:31 PM

137594

Page 4

Item ID: D3859-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Wearplate
Start Date: 10/02/15 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 10/07/15 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	Identify as per dwg & Stock Location: <u>Stock</u>	0.00							
180									
Packaging	Memo	0.00				4			
Packaging									
190	QC21 - Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.01							
Quality Control									

JAN 12 2016

DAS
6
9-88

JAN 13 2016

JAN 13 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

Wednesday, October 07, 2015 12:40:31 PM

Page 1

Work Order ID: 137594

137594

Parent Item: D3859-041

D3859-041

Parent Item Name: Wearplate

Start Date: 10/02/15

Required Date: 10/07/15

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A 09-02-03 new issue DD verified by:EC
14.04.30 as per dwg rev.b DD verified by:JLM

IPP Rev:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4379-5		Manufactured	No			130	Each	93.0000	6	24			
										**	x24	20	16-01-12
D4379-5													
Wearplate Cup													

B 134907 x 9

Location	Loc Qty	Loc Code
WA001	83	
126889	4	
129613	10	
133126	7	
135455	62	x15
WA002	10	
134907	10	

M304S16GA

Purchased

No

100

sf

195.2500

0.85

3.4

**

on 16/01/07

M304S16GA

304/316 Sheet .063

Location	Loc Qty	Loc Code
MAT019	195.25	
m131384	4.4	
m132797	47.7	
m132835	143.15	8-8

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

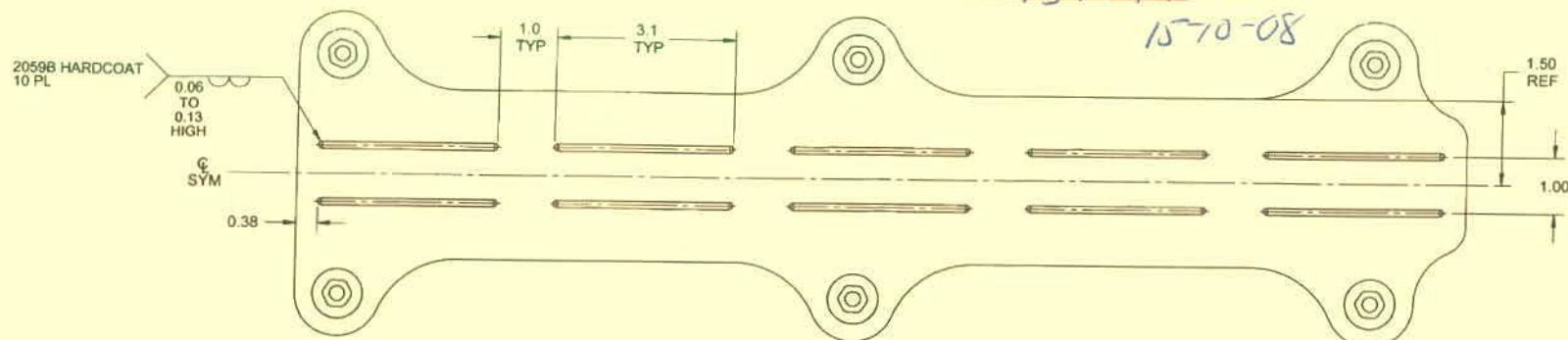
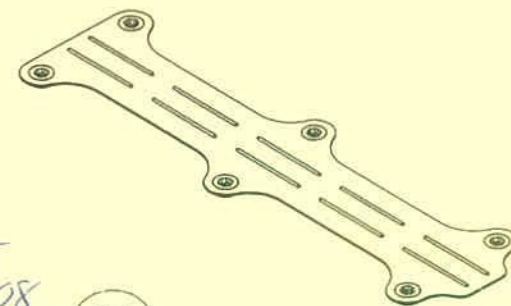
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

ITEM NO.	QTY.	P/N	DESCRIPTION
	X	D3859-041	WEARPLATE
1	1	D3859-1	WEARPLATE
2	6	D4379-5	WEARPLATE CUP

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 137594 ML5
15-10-08



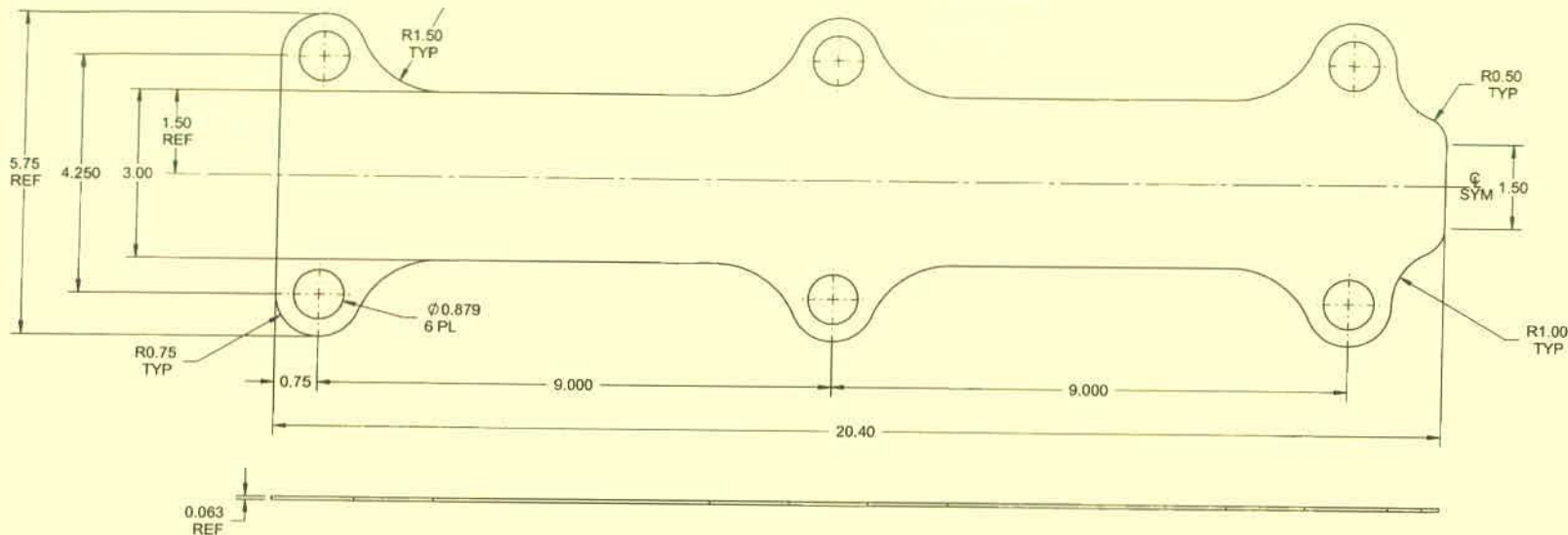
D3859-041 WEARPLATE

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3859-041" & B/N USING FINE POINT PERMANENT INK MARKER
 - 7) WEIGHT: 1.58 lbs
 - 8) WELD PER DART QSI 004

RELEASED
2014 MAR 29
ECN 14-544

APPROVED

B	D4379-5 CUP WAS D3009-3 CUP	DB	14.03.05
A	NEW ISSUE	HS	09.01.26
REV	DESCRIPTION	BY	DATE
DESIGN	HS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DB		
CHECKED	AP	DRAWING NO.	REV. B
MFG. APPR.	DD	D3859	SHEET 1 OF 2
APPROVED	MP	TITLE	SCALE
DE APPR.	DS	WEARPLATE	NTS
DATE	14.03.05	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS TO BE USED ONLY FOR THE PURPOSES FOR WHICH IT WAS ISSUED. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



D3859-1 WEARPLATE

RELEASED

2014 MAR 29 *up*

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 16 GAUGE (0.063 THICK).
PER MIL-S-5059 (ANNEALED) 2B FINISH OR AMS 5513/5524 (REF DART SPEC M304S16GA)
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 1.29 lbs

APPROVED

DESIGN	HS	DART AEROSPACE LTD	
DRAWN	DB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AP	DRAWING NO.	REV. B
MFG. APPR.	DD	D3859	SHEET 2 OF 2
APPROVED	MP	TITLE	SCALE
DE APPR.	DS	WEARPLATE	NTS
DATE	14.03.05	COPYRIGHT © 2009 BY DART AEROSPACE LTD	
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